

# TMIP Connection

## The Travel Model Improvement Program Newsletter



## Travel Model Improvement Program (TMIP): 2004

**This special edition** of the TMIP Connection is dedicated to the “year in review.” In Fiscal Year 2004 (FY04), we made progress on our three strategic goals. Here are highlights of the TMIP year:

### What have we learned?

Based on our activities over the past year and on input received from the TMIP Review Panel and others, it is useful to discuss what lessons we have learned.

### Peer Reviews are Important

Our experience with the peer review program has taught us that peer reviews are an excellent new service to the profession and source of programmatic feedback. Agencies have received extremely useful recommendations from peer reviewers. The flexibility built into the program enables the planning agency to focus peer reviewers on a variety of issues, from improvements in their current models to complete redesigns of their modeling process. Also, we received valuable feedback from the program synthesis of the peer reviews, which identified several crosscutting areas to focus technical assistance, training and research activities. There has been a high level of demand for support for peer reviews, which is anticipated to continue.

### Focus on Model Quality Needed

There have been calls over the past year for more attention on model quality from stakeholder groups and the TMIP Panel. We are initiating and championing efforts to help bring about change in this area.

### The TMIP mission:

*TMIP will ...*

#### Do What?

*Support and empower planning agencies.*

#### How?

*Through leadership, innovation and support of planning analysis improvements.*

#### Why?

*To provide better information to support transportation and planning decisions.*

### The Future is Uncertain

The lack of a reauthorization bill has created programmatic and funding uncertainty for TMIP. Reauthorization could provide confirmation of the current TMIP strategic direction, or could significantly alter the focus of TMIP.

### Where are we going?

#### Continue Core Activities

We will continue core activities that include training, clearinghouse

and research support functions. In addition, as funding is made available, we will continue our support of the Peer Review Program.

### Respond to Emerging Needs

In the past year, there has been increased focus on several issues which we plan to address. These include a forum on pricing and tolling analysis, to be held early next year with the Office of the Secretary. In addition, several forums are planned to address transportation impacts on land development and ways to communicate modeling results to decision makers and the public.

### Build Staff Capacity for Federal Review

As more emphasis is being placed on the quality of modeling in the United States, FHWA has worked to incorporate modeling issues in the transportation planning certification review process. To make this fully effective, it is crucial to train Federal staff on travel modeling issues. To that end, TMIP will support increased training for Federal field staff, particularly on travel modeling basics and their role in ensuring modeling quality.

### Track Reauthorization

We will continue to track the reauthorization process and its implications for TMIP and the travel modeling profession. ■



U.S. Department of Transportation  
Federal Highway Administration

## Goal One “To help planning agencies build their institutional capacity to develop and deliver travel related information to support transportation and planning decisions.”

*Highlights of FY04 Training and Outreach Goal activities.*

### Peer Review Program

The Peer Review Program provides state and local planning agencies the ability to solicit input from experts in the field of travel demand modeling. In FY04, nine Peer Review Panels were sponsored. These Panels reflected a broad spectrum of MPOs and state DOTs throughout the nation (see Map). Five of the Panels – two each at DRCOG in Denver and SCAG in Los Angeles, and one at BMC – dealt with large urbanized areas developing innovative techniques to improve their current model program, while the other two dealt with other metropolitan planning issues. Additionally, two of the panels focused on State DOT modeling efforts. Currently, there are three peer reviews planned, funded and scheduled for FY05.

### Synthesis and individual reports

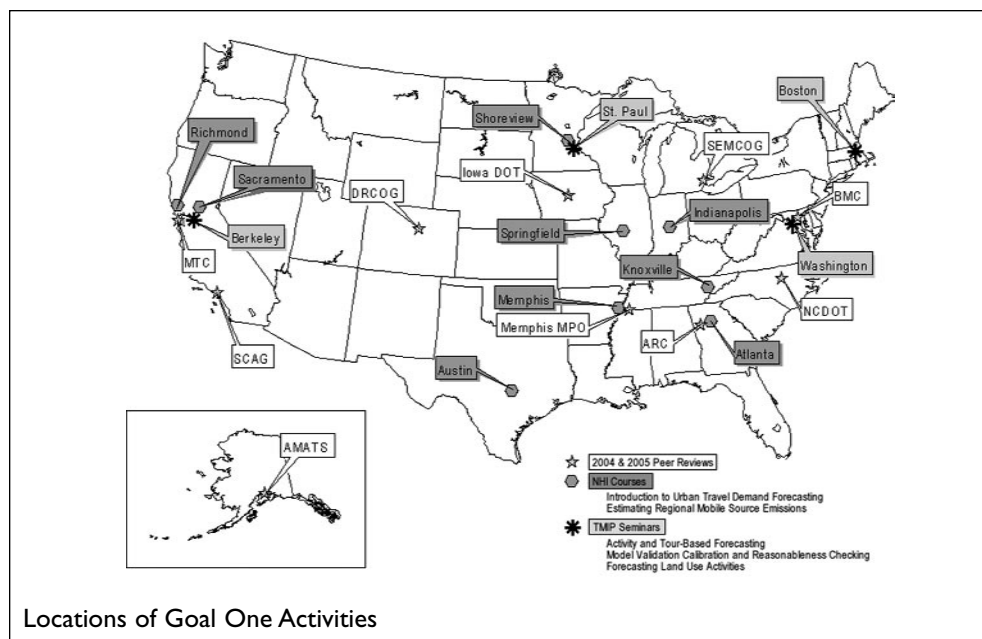
Individual reports of each review and a synthesis report that both discusses each review in detail and synthesizes recommendations for MPOs and DOTs were prepared. The synthesis report includes technical recommendations, recommendations for managing the modeling process and results and improvements for conducting peer reviews.

The full set of individual reports and the synthesis are posted on the TMIP Web site.

### Training

FY04 saw ten TMIP seminars and nine travel forecasting related courses from the National Highway Institute (for locations see Map), delivering training to 419 individuals.

A highlight of FY04 training was the successful launch and delivery of a new



seminar, Activity and Tour-Based Modeling. Traditionally the seminars have been sponsored, paid for and presented to the user community by FHWA. Recently there have been requests that led us to develop an “on-demand delivery” capability for the seminars. Work began in FY04 to deliver three seminars on demand in FY05, we also anticipate delivering each seminar three times in FY05, beyond any on-demand requests.

### Tech Transfer/Communications Newsletter

In FY04 TMIPConnection featured GPS, highlighted MPOs or States in various stages of the model process, and was dedicated to technology transfer to the modeling community.

An addition this year was the creation of the “model citizen” guest column. Model citizen is designed to highlight the practitioner community. In fact, FY04 saw a shift towards more articles solicited from the user community. This change from past years is a proud accomplishment that already has been rewarded in positive feedback from the modeling community.

### Web site

The TMIP Web Working Group (TWWG) was convened in FY04. The group is a loosely affiliated body of experts charged with maintaining Web site content, particularly with regard to the robustness of the clearinghouse. The TWWG keeps “on the pulse” of the modeling and planning analysis community to ensure the website and clearinghouse stay up to date and relevant. The TWWG is composed of public agency professionals, academics and consultants versed in modeling and planning analysis, as well as adjunct disciplines.

The TMIP Web site contains the latest information for both modelers and practitioners, highlighting new documents and data, and archiving historical information. From TMIP’s Web site a user can access the latest information on relevant conferences and courses, the national MPO database, the TMIP clearinghouse, information on TRANSIMS, or can subscribe to the email list.

In FY04, the TMIP Web site had 29 percent growth in page views and 14 percent growth in total visitors.

### Email list

The TMIP email list had an average of 537 subscribers in FY04. List traffic in FY04 averaged about 48 messages per month, original postings comprised a third of traffic and replies the rest.

Postings ranged from tech transfer discussions to requests for papers and

Course or Seminar	Times Presented	Attendance
Introduction to Travel Demand Forecasting Course	6	121
Estimating Regional Mobile source Emissions Course	3	51
Activity and Tour-Based Modeling Seminar	4	103
Forecasting Land-use Activities Seminar	3	71
Travel Model Validation, Calibration and Reasonableness Checking Seminar	3	73
<b>Total</b>	<b>19</b>	<b>419</b>

GOAL ONE CONTINUED ►

## **Goal Two** “To develop and improve analytical methods that respond to the needs of planning and environmental decision making processes”

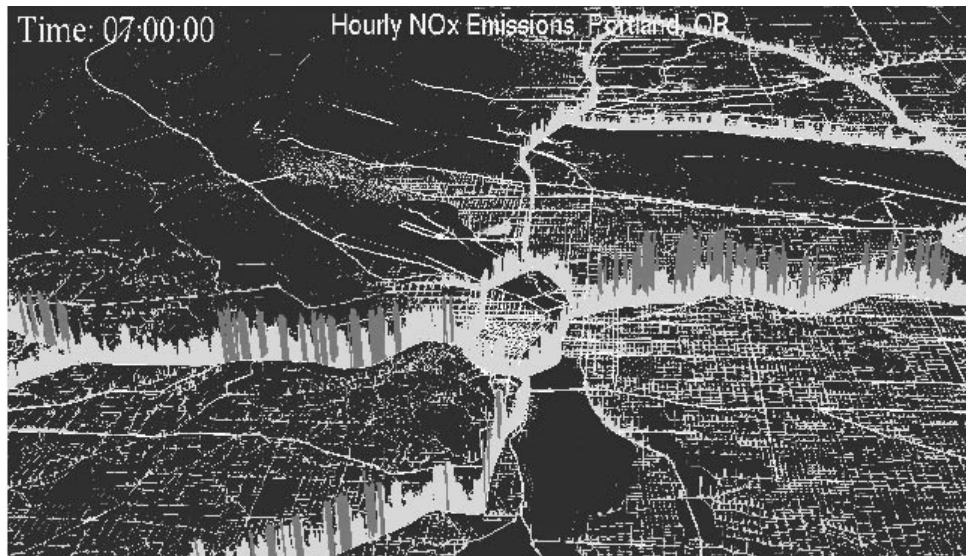
### *Highlights of FY04 Research Goal Activities.*

#### **TRANSIMS**

We continue to work on the implementation of TRANSIMS in Portland, Oregon. We are nearing completion of microsimulator testing and demonstrating the ability to use TRANSIMS to perform region-wide traffic simulations using traditional MPO networks. We have also made modifications to the software to correct for problems of lost vehicles and have reduced the number of lost vehicles to a reasonable amount. We have specified a complete “Gen2” model that uses TRANSIMS capability to explicitly include time of day within the travel forecasting process. We are now calibrating the destination choice and mode choice components. We expect to begin testing the entire model set, including feedback of individual travelers, early in 2005.

#### **Accounting for Commercial Vehicles in Urban Transportation Models Study**

The first phase of this study was completed in March and the final summary report



along with more detailed task reports, covering literature review, magnitude and distribution, and methods, parameters and data sources have been posted on the TMIP clearinghouse Web site. In addition, papers discussing the general findings of the study have been accepted for presentation at the TRB Annual Meeting and on estimation methods are being prepared for presentation at the Planning Applications Conference in Portland, Oregon.

#### **Forecasting Person Travel by Time of Day research effort**

This project developed travel forecasting methods that allow trip and tour models to respond to congestion and pricing. The methods rely on travel survey data to develop base parameters and initial travel times by time of day. These methods are suitable for consideration in updates of trip-based models as well as ongoing developments of tour and activity models. A case study was completed for each type of model. ■

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#### **GOAL ONE CONTINUED ►**

abstracts to course and conference announcements to job postings, the list can be a hotbed of controversy and each issue of the TMIPConnection summarizes a hot topic that came up since the last issue.

#### *Clearinghouse*

The TMIP clearinghouse is both physical and virtual. There are 35 titles available in both downloadable and order and ship format. Most documents, however, are either one or the other. There are 221 web-only documents and 19 print-only. The sheer numbers represented by electronic hits to electronically available documents dwarf the numbers representing paper copies of documents requested and shipped, therefore it is necessary to treat the two subjects separately.

#### *Print*

There are 60 titles physically available from the TMIP Clearinghouse. In FY04, the TMIP Clearinghouse showed 20 percent growth in demand for printed and mailed material from the previous year. The most popular document remains the Introduction to Travel Demand Forecasting

Self Instruction CD-ROM with 82 requests shipped from the clearinghouse (in addition to hundreds dispersed at conferences and meetings throughout the year). The instructional CD is mailed to all registered students of Introduction to Travel Demand Forecasting NHI Course. In 2005, we will send it to Estimating Regional Mobile Source Emissions registrants as well.

#### *Electronic*

Of the 256 documents available for downloading or web viewing, we have statistics for only the top 18. Of those 18, we surmise each document was viewed between 1,000 and 3,000 times during FY04. The top accessed documents were:

1. Urban Transportation Planning In the United States: An Historical Overview
2. GIS in Transportation Planning & Case Studies
3. Model Validation and Reasonableness Checking Manual
4. Quick Response Freight Manual: Final Report
5. Considering Safety in the Transportation Planning Process

6. Activity-Based Travel Forecasting Conference Proceedings
7. Manual of Regional Transportation Modeling Practice for Air Quality Analysis
8. Land Use Compendium
9. Calibration of Traffic Forecasting Models in Small Urban Areas
10. Population Forecasting Methods: A Report on Forecasting and Estimating Methods

#### **Peer Exchanges**

Two Peer Exchanges were planned and programmed in FY04 for delivery in FY05. The topics are “Activity Data Transferability” and “Pricing and Tolling Analysis and Transportation.” Topics for future peer exchanges include:

- Time of day, peak spreading and over-capacity links
- Transportation Impacts on Development/Land Use
- Communication and Use of Travel Models in Decision Making
- Issues in Data Collection and Maintenance
- Freight/light-duty commercial vehicles ■

### Goal Three *“To develop mechanisms to ensure the quality of technical analysis used to support decision-making and to meet local, state, and federal program requirements”*

*Highlights of FY04 Quality Assurance Goal activities.*

#### Travel Model Synthesis (NAS)

We have put a cooperative agreement in place with the National Academy of Sciences for the “Determination of the State of the Practice in Travel Forecasting.” The effort will determine the state of the practice in travel forecasting and address the following issues:

- What models do planning agencies currently have under development?
- Do planning agencies use multiple models for multiple purposes?
- What are key similarities and differences among planning agencies in the development and application of models and what factors are associated with these differences?
- Identification of technical shortcomings in the models for their intended uses

such as technical analyses of long-range plans, emissions analyses, FTA New Starts analyses and NEPA analyses.

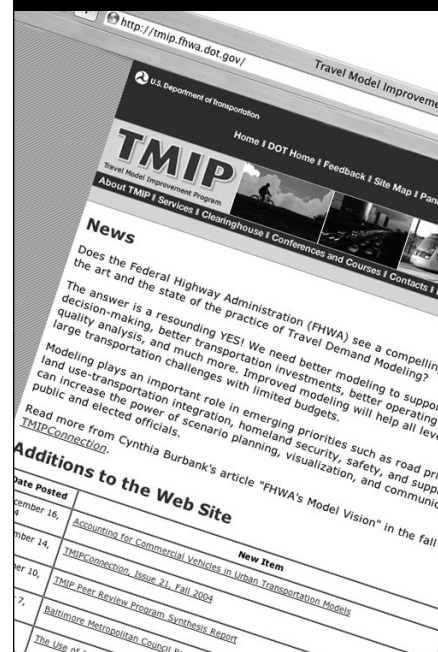
- What are the obstacles to appropriate application of these models?
- Other questions raised by the panel.

#### Certification Checklist for Travel Forecasting Methods

The certification checklist for travel forecasting methods has been posted on the FHWA public website, <http://www.fhwa.dot.gov/planning/certcheck.htm>, and included in the Certification Handbook used by FHWA/FTA field planners for their triennial certification reviews. The primary purpose of the checklist is to identify those MPOs who may be at risk in order to provide them with technical assistance to improve their travel models, and not to cite them as “correctible actions.” Over the summer, FHWA, FTA and the Volpe Center have been conducting regional workshops for our field planners on Certification Reviews and have stressed the need to address travel forecasting methods as part of the certification review process. ■

For more information on TMIP, be sure to visit our web site:

<http://tmip.fhwa.dot.gov>



FHWA-HEP-05-013

# TMIP

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Travel Model Improvement Program  
c/o Texas Transportation Institute  
Gibb Gilchrist Building  
2929 Research Pkwy.  
TAMU Research Park  
College Station, TX 77843-3135

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sending any address corrections  
to [TMIP@tamu.edu](mailto:TMIP@tamu.edu).